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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,221	03/10/2005	Scott H. Wasserman	60487F	3228

35503 7590 03/12/2007  
UNION CARBIDE CHEMICALS AND PLASTICS TECHNOLOGY  
CORPORATION  
P.O. BOX 1967  
MIDLAND, MI 48641-1967

EXAMINER
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MAYO III, WILLIAM H

ART UNIT	PAPER NUMBER
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2831

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/12/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/527,221

Applicant(s)

WASSERMAN ET AL.

Examiner

William H. Mayo III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for domestic priority under 35 U.S.C. 120. The 371 Application Number PCT/US03?28491, being filed on September 10, 2003.
2. Acknowledgment is made of applicant's claim for provisional priority under 35 U.S.C. 119(e). The provisional application being filed September 10, as Application No. 60/409,566.

### *Specification*

3. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because throughout the abstract it states the term "comprising", which is improper language for the abstract. The applicant is required to replace the term with the term "having" to provide the abstract with proper language.

6. In lines 3-7, the abstract refers to purported merits and speculative applications of the invention, which is improper content for the abstract. The applicant is required to remove all instances of purported merits and speculative applications of the invention to provide the abstract with proper content.

7. In lines 7-8, the applicant states the terms "the present invention", which is improper content for the abstract. The application is required to remove the previous stated terms to provide the abstract with proper content. Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. Claim 7 recites the limitation "The cable of any of the preceding claims" in line 1 and then states "the jacketing or sheathing layer of claim 1", which is confusing and renders the claim indefinite. It is unclear whether the applicant is intending on having the claim depend from and therefore the metes and bounds of the invention cannot be determined. The applicant should specify which claim, claim 7 depends from to establish clear metes and bounds of the invention.

***Treatment of Claims***

11. The examiner assumes that claim 7, is depended upon claim 1, for the purpose of determining metes and bounds of the invention.

***Claim Rejections - 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 1-3, 7, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Foster et al (Pat Num 5,798,427, herein referred to as Foster). Foster teaches a composition that may be utilized in a power cable comprising one or more electrical wires (Col 2, lines 24-31). Specifically, with respect to claim 1, Foster discloses a composition that may be utilized as a conductor sheath (Col 2, lines 24-31), and may comprising polypropylene (Col 10, lines 44-48), wherein the composition has a relaxation spectrum (RSI) and Melt Flow (MF), such that  $(RSI)(MF)^a$ , that is greater than about 12 when a is about 0.5 (i.e. 26 when  $a=0.7$ , Col 3, lines 25-30). With respect to claim 2, Foster discloses that the polypropylene is coupled to an ethylene polymer (Col 2, lines 45-50). With respect to claim 3, Foster discloses a composition that may be utilized as a conductor sheath (Col 2, lines 24-31), and may comprising polypropylene (Col 10, lines 44-48), wherein the composition has a relaxation spectrum (RSI) and Melt Flow (MF), such that  $(RSI)(MF)^a$ , that is greater than about 12 when a is about 0.5 (i.e. 26 when  $a=0.7$ , Col 3, lines 25-30), wherein the composition meets the formula  $Y \geq 1.25$ , (i.e. all of the claimed limitations are present and therefore the prior art must have the same characteristics). With respect to claim 7, Foster discloses that the inner and outer jackets of conductors may comprise ethylene and polypropylene (Col 2, lines 29-31), therefore resulting in the inner jacket having a composition that has a relaxation spectrum (RSI) and Melt Flow (MF), such that  $(RSI)(MF)^a$ , that is greater than about 12 when a is about 0.5 (i.e. 26 when  $a=0.7$ , Col 3, lines 25-30) and an outer layer comprising ethylene (Col 2, lines 45-50). With respect to claim 9, Foster discloses a composition that may be utilized as a conductor sheath (Col 2, lines 24-31),

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and may comprising polypropylene (Col 10, lines 44-48), wherein the composition has a relaxation spectrum (RSI) and Melt Flow (MF), such that  $(RSI)(MF)^a$ , that is greater than about 12 when a is about 0.5 (i.e. 26 when  $a=0.7$ , Col 3, lines 25-30), wherein the composition has a melt strength greater than 8 cN (i.e. all of the claimed limitations are present and therefore the prior art must have the same characteristics).

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claims 4-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foster (Pat Num 5,798,427) in view of Dixon et al (Pat Num 6,594,427, herein referred to as Dixon). Foster teaches a composition that may be utilized in a power cable comprising one or more electrical wires (Col 2, lines 24-31) as disclosed above with respect to claim 1 above. Specifically, with respect to claim 8, Foster discloses a composition that may be utilized as a conductor sheath (Col 2, lines 24-31), and may comprising polypropylene (Col 10, lines 44-48), wherein the composition has a relaxation spectrum (RSI) and Melt Flow (MF), such that  $(RSI)(MF)^a$ , that is greater than about 12 when a is about 0.5 (i.e. 26 when  $a=0.7$ , Col 3, lines 25-30), wherein the composition meets the formula  $Y \geq 1.25$ , (i.e. all of the claimed limitations are present and therefore the prior art must have the same characteristics).

However, Foster doesn't specifically disclose the polypropylene being impact modified propylene copolymer (claims 4 & 8), nor the impact modified propylene copolymer comprising a continuous phase and an elastomeric phase, wherein the elastomeric phase is present in the amount of at least 9% weight of impact modified polypropylene copolymer (claim 5), nor the polypropylene being foamed polypropylene (claim 6).

Dixon teaches a communication cable (Fig 1) being made of impact modified polypropylene copolymer compounded with UV stabilizers, that is lower in cost, has low



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post extrusion shrinkage, high melting temperature, increased crush and abrasion resistance, when compared to polyethylene (Col 4, lines 7-42). Specifically, with respect to claims 4-6 and 8, Dixon teaches a cable (10) having a core tube (20) comprising transmission media (40), wherein the core tube (20) is surrounded by sheath (30), wherein the sheath is made of a impact modified polypropylene (Col 5, lines 45-47), wherein the modified polypropylene inherently comprises a continuous phase and an elastomeric phase, wherein the elastomeric phase is present in the amount of at least 9% weight of impact modified polypropylene copolymer (i.e. Acctuf3045 or 3243, EscorenePP7031 or PP7822, listed in Col 5, lines 60-66, are modified polypropylene exhibits the above mixtures (Col 5, lines 60-65).

With respect to claims 4-6 and 8, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the composition of Foster to comprise the modified impact polypropylene material as taught by Dixon because Dixon teaches that such an impact modified polypropylene copolymer compounded with UV stabilizers, is normally lower in cost, has low post extrusion shrinkage, high melting temperature, increased crush and abrasion resistance, when compared to modified polyethylene (Col 4, lines 7-42), such as that polyethylene taught by Foster.

### ***Conclusion***

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Booth et al (Pub Num 2002/0121388), Gagnon (Pat

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Num 6,441,308), Gagnon (Pub Num 2003/0019655), Sishta et al (Pat Num 5,852,143), Maki et al (Pat Num 6,455,602), Hesse et al (Pat Num 6,251,995), Jackson et al (Pat Num 2003/0050401), Borealis (EP Pat Num 1 295 910), Wassermann et al (EP Pat Num 1 038 889), and Sistha (EP Pat Num 1 217 013 ), all of which disclose various composition for usage with cables.

### ***Communication***

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

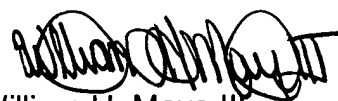
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read "William H. Mayo III", written over a circular stamp.

William H. Mayo III

Primary Examiner

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WHM III

March 3, 2007